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George Schmitt

AFRL engineer receives Technology Transfer award

by Timothy R. Anderl, Materials and Manufacturing Directorate

WRIGHT-PATTERSON AFB, Ohio — George Schmitt, a division chief from Air Force Research Laboratory's Materials and Manufacturing Directorate, has received the Federal Laboratory Consortium's Midwest Region Technology Transfer Award for work related to Brake-by-Wire (BbW) technologies.

Schmitt received first place in the Automotive and Aerospace category, and honorable mention in the Materials/Manufacturing and Consumer Products categories during the FLC's Midwest Region meeting at Argonne National Laboratory near Chicago, Ill., Sept. 24-26.

In June 2001, AFRL and Delphi Automotive Systems signed a technical, collaborative agreement to bring BbW technology to the automotive industry.

While conventional car brake systems are hydraulic, this technology stops a vehicle by sending electrical signals to the brake system. BbW technology is expected to offer consumers increased safety and vehicle stability, while helping automotive vehicle manufacturers, who will be able to combine vehicle components into modular assemblies using cost-effective manufacturing processes.

The Air Force has extensive background in landing gear and fly-by-wire systems, while Delphi will work to integrate BbW technologies into next-generation, vehicle handling and safety systems. Introducing the technology to the commercial arena also will benefit the Air Force by creating a demand for shared components, reducing costs for government and industry applications. The collaboration will also leverage investments in more electric aircraft and validate this technology on a large scale.

Chief of the Integration and Operations Division since 1997, Schmitt has led several organizations collaborating on various technical projects focused on BbW technology. He directed experts from Materials and Manufacturing, Air Vehicles, and Propulsion Directorates, who shared information about electrical motors and actuators, high-temperature insulation materials, re-configurable control technologies, fault-tolerant architectures, and reliable wiring/connectors.

Schmitt's 37-year career with the directorate started in 1963 when he was an Air Force lieutenant. Since then, he has worked on developing aircraft and spacecraft coatings, including nonmetallic and laser-hardened materials, and state-of-the-art polyurethane and fluoroelastomer-based erosion coatings.

Responsible for complete restructuring and establishment of a four-branch division in support of the new directorate in October 1997, Schmitt has received several awards for his work, including Outstanding Engineer from Affiliate Societies Council of Dayton; Society of Automotive Professional Engineers Fellow; Association of International Aeronautics and Astronautics Associate Fellow; "Who's Who in Engineering"; and numerous Air Force civilian performance awards.

The FLC was organized in 1974, and formally chartered by the Federal Technology Act of 1986, to promote and strengthen nationwide technology transfer. FLC is composed of more than 700 major federal laboratories and centers, plus their parent departments and agencies. The FLC-Midwest is a regional network of 15 major federal research laboratories in six states including Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. @